We Claim:

1. A method for classifying vertically partitioned data comprising the steps of:

categorizing subsets of classifiers for the partitioned data;

determining class labels for a data pattern of the partitioned data for which the classifier subsets are consistent;

estimating posterior probabilities for the class labels of consistent classifier subsets; and

approximating the posterior probability of the partitioned data based upon the estimated posterior probabilities of the consistent classifier subsets.

2. The method as claimed in claim 1, further comprising the step of using a predetermined consistency condition for a classifier with respect to other classifiers.

3. The method as claimed in claim 1, further comprising the step of determining the mutual consistency of each classifier with respect to the other classifiers in a classifier subset.

4. The method as claimed in claim 1, wherein the posterior probability is approximated from the estimated posterior probabilities using a Bayesian framework.

5. The method as claimed in claim 1, wherein the class label is selected for the test data for which the combined posterior is maximum.

6. A computer program product for classifying partitioned data comprising computer software recorded on a computer-readable medium for performing the steps of:

categorizing subsets of classifiers for the partitioned data;

determining class labels for a data pattern of the partitioned data for which the classifier subsets are consistent;

estimating posterior probabilities for the class labels of consistent classifier subsets; and

approximating the posterior probability of the partitioned data based upon the estimated posterior probabilities of the consistent classifier subsets.

7. A computer system for classifying partitioned data comprising computer software recorded on a computer-readable medium for performing the steps of:

categorizing subsets of classifiers for the partitioned data;

determining class labels for a data pattern of the partitioned data for which the classifier subsets are consistent;

estimating posterior probabilities for the class labels of consistent classifier subsets; and

approximating the posterior probability of the partitioned data based upon the estimated posterior probabilities of the consistent classifier subsets.